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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,040	12/27/2004	John W. Bogdan		8307
7590	11/21/2008		EXAMINER	
John W Bogdan 1210 Major Street Ottawa, K2C 2S2 CANADA			JOHNSON, RYAN	
			ART UNIT	PAPER NUMBER
			2817	
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			11/21/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/520,040	BOGDAN, JOHN W.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ryan J. Johnson	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 09 September 2008.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 68,69 and 88-91 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 68,69 and 88-91 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 09 September 2008 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. This action is responsive to the amendments received September 10, 2008. Claims 68, 69, and 88-91 are pending. Claim 69 has been amended. Claims 1-67 and 70-87 have been cancelled. New claims 88-91 have been added. Amendments to the drawings and specification have been received.

### *Response to Arguments*

2. Applicant should submit an argument **under the heading “Remarks”** pointing out disagreements with the examiner's contentions. Applicant must also discuss the references applied against the claims, explaining how **the claims** avoid the references or distinguish from them.

3. Regarding **Ad. 2**, Applicant argues, “Such IDS is supplied herein as 3. Citations List ... which shall be inserted at the end of BACKGROUND OF THE INVENTION as the 3<sup>rd</sup> subsection.” However, as stated in the previous action and repeated below, the listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, **“the list may not be incorporated into the specification but must be submitted in a separate paper.”** Therefore, **unless the references have been cited by the examiner on form PTO-892, they have not been considered.**

4. 37 CFR 1.98(a) and (b) state:

§ 1.98 Content of information disclosure statement.

(a) Any information disclosure statement filed under § 1.97 shall include the items listed in paragraphs (a)(1), (a)(2) and (a)(3) of this section.

(1) A list of all patents, publications, applications, or other information submitted for consideration by the Office. U.S. patents and U.S. patent application publications must be listed in a section separately from citations of other documents. Each page of the list must include:

- (i) The application number of the application in which the information disclosure statement is being submitted;
- (ii) **A column that provides a space, next to each document to be considered, for the examiner's initials;** and
- (iii) **A heading that clearly indicates that the list is an information disclosure statement.**

(2) A legible copy of:

- (i) Each foreign patent;
- (ii) Each publication or that portion which caused it to be listed, other than U.S. patents and U.S. patent application publications unless required by the Office;
- (iii) For each cited pending unpublished U.S. application, the application specification including the claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion; and

(iv) All other information or that portion which caused it to be listed.

(3)

(i) A concise explanation of the relevance, as it is presently understood by the individual designated in § 1.56(c) most knowledgeable about the content of the information, of each patent, publication, or other information listed that is not in the English language. The concise explanation may be either separate from applicant's specification or incorporated therein.

(ii) A copy of the translation if a written English-language translation of a non-English-language document, or portion thereof, is within the possession, custody, or control of, or is readily available to any individual designated in § 1.56(c).

(b)

(1) Each U.S. patent listed in an information disclosure statement must be identified by inventor, patent number, and issue date.

(2) Each U.S. patent application publication listed in an information disclosure statement shall be identified by applicant, patent application publication number, and publication date.

(3) Each U.S. application listed in an information disclosure statement must be identified by the inventor, application number, and filing date.

(4) Each foreign patent or published foreign patent application listed in an information disclosure statement must be identified by the country or patent office which issued the patent or published the application, an appropriate document number, and the publication date indicated on the patent or published application.

(5) Each publication listed in an information disclosure statement must be identified by publisher, author (if any), title, relevant pages of the publication, date, and place of publication.

5. An amendment to the specification including "Citations" does not constitute an Information Disclosure statement and does not fulfill any duty to disclose obligation for Applicant. A tutorial for filing an Information Disclosure Statement (IDS) can be found at [http://www.uspto.gov/ebc/portal/efs/dct\\_ids\\_tutorial.pdf](http://www.uspto.gov/ebc/portal/efs/dct_ids_tutorial.pdf) while an IDS form can be found at [http://www.uspto.gov/ebc/portal/efs/US\\_IDS\\_Form\\_SB\\_08a.pdf](http://www.uspto.gov/ebc/portal/efs/US_IDS_Form_SB_08a.pdf).

6. Regarding arguments under headings **Ad.3, Ad.4, Ad.7, and Ad.8**, the objections to the drawings and rejection of claims 68 and 69 under 35 U.S.C. 112, first paragraph, have been withdrawn in light of amended Fig.1A received September 9, 2008. Fig.1A provides an overview of the greater system and couplings between Figs.1-3D. Since Fig.1A provides a clarification for matter already present in Figures 1-3D (through the various input/output annotations present in original Figures 1-3D), no new matter has been presented and Figure 1A has been entered.

7. The rejection of claim 69 under 35 U.S.C. 112, second paragraph, presented in the previous action has been withdrawn in view of the amendment to claim 69.

8. Regarding arguments under headings **Ad.12 - Ad.16**, Applicant's arguments filed September 9, 2008 have been fully considered but they are not persuasive.

9. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., high rate data links - see Page 2, counting a number of entire sampling clock periods occurring during the inter-transition interval, deriving an integer estimate..., simple addition of such integer estimate - see Page 3) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

10. Applicant argues, "Since the way and the result of such SDR are so substantially different in multiple major aspects, the DSR can not represent prior art to such SDR". However, Applicant fails to explain how the invention, **as claimed**, is not anticipated by Reuveni (U.S. Patent No. 6,987,817, as cited in the previous action). While Reuveni is designed for recovery in compact disc or digital video disc applications, the claims do not limitation the invention in such a way as to distinguish the invention from Reuveni.

11. Regarding Applicant's argument, that Reuveni is non-enabling, the Examiner respectfully presents that Reuveni is a granted Patent, and as such, is presumed enabling.

12. See MPEP 716.07, which states:

"Since every patent is presumed valid (35 U.S.C. 282), and since that presumption includes the presumption of operability (Metropolitan Eng. Co. v. Coe, 78 F.2d 199, 25 USPQ 216 (D.C.Cir. 1935), examiners should not express any opinion on the operability of a patent. Affidavits or declarations attacking the operability of a patent cited as a reference must rebut the presumption of operability by a preponderance of the evidence. In re Sasse, 629 F.2d 675, 207 USPQ 107 (CCPA 1980).

13. Arguments presented under the heading **Ad.15** state, "Such OR terminology should be acceptable in claims 68 and 69." While OR terminology *is* acceptable, the Examiner notes that OR terminology is broad and results in parts of the claim as being *optional*. For Example, in a claim that reads, "A method comprising: performing A or performing B", any prior art that does **either** A or B falls within the scope of the claim (i.e. if prior art is found that performs A, performing B is not required to fall within the scope of the claim). If the scope of the claim is intended to include **both** A *and* B, "AND" terminology should be used. For example claim 69 reads, "comprising use of multiple sequential processing stages or parallel processing phases of said captured samples..." Therefore, the scope of claim 69 is broad enough wherein prior art that comprises *either* multiple sequential processing stages *or* parallel processing phases falls within the scope of the claim. Reuveni discloses multiple sequential processing stages and limitations related to said sequential processing stages, thus parallel processing phases is not required by the scope of the claim. However, if claim 69 were to read, "comprising use of multiple sequential stages and parallel processing phases", the scope of the claim would require both sequential stages and parallel processing phases.

14. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks **the claims** present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how any amendments or new claims avoid such references or objections.

***Information Disclosure Statement***

15. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

***Specification***

16. The amendment filed September 9, 2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: a cited document (D5, Reuveni) and description of said reference (see Page 3).

17. Furthermore, after further consideration, the Examiner notes the amendments filed December 27, 2004, and November 19, 2007 also contain new matter not found in the original disclosure. The added material which is not supported by the original

disclosure is as follows: cited documents (D1-D5, Reuveni) and description of said references.

Applicant is required to cancel the new matter not presented in the original disclosure in the reply to this Office Action.

18. While explanations of the relevance of cited prior art is appreciated, such explanations should be placed under a heading "Remarks" and not be amended into the Application.

#### ***Claim Objections***

19. Claim 69 is objected to because of the following informalities: "the original parallel phase" lacks antecedent basis. The Examiner suggests amending the recitation to read, "an original phase". Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

20. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

21. Claims 88-91 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 88-91 recite limitations reading, "measurement of a length of a pulse of the signal occurring between said phases of signal edges, based on a known relation between a frequency of the sampling clock and

a frequency of a received signal clock" and variants thereof. However, the original disclosure does not appear to disclose such functionality. The original disclosure discloses measurement of pulse lengths by using phases of signal edges, but measuring pulse length based on a known relation between a frequency of the sampling clock and a frequency of a received clock could not immediately be found within the original disclosure.

***Claim Rejections - 35 USC § 102***

22. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
23. Claims 68 and 69 are rejected under 35 U.S.C. 102(e) as being anticipated by Reuveni (U.S. Patent No. 6,987,817).
24. Claims 68 and 69 recite "OR" terminology. The use of such terminology renders limitations within the claims optional. For example:
25. Claims 68, 69, and 88-91 recite, "the sampling clock or its sub-clocks". The scope of the limitation is broad enough to encompass only one of the sampling clock and its sub-clocks.
26. Claim 69 recites, "comprising use of multiple sequential processing stages or parallel processing stages". The scope of the claim is broad enough to encompass only one of the sequential processing stages and parallel processing stages.
27. Regarding claim 68, Reuveni discloses a method of digital signal processing of multi-sampled phase (see Figs.1-11) for recovering data from a received signal waveform (DIN), captured with a sampling clock (PLL\_PHASES), by processing length

of inter-transition intervals of the captured waveform (Reuveni discloses calculating symbol width; see col.5,31 - col.6,10), the method comprising the steps of:

capturing multiple samples (via 132) of the received signal during every symbol time by the sampling clock (PLL\_PHASES; see col.4,15-40);

detecting transition times of the received waveform and measuring the length (i.e. symbol width) occurring between the transition times (circuit 170 is configured to determine symbol width, thus the transition times between waveforms; see col.5,31- col.6,10); and

calculating a number of data bits received during the inter-transition interval by evaluating the lengths of the inter-transitional interval (packed output data circuit 174 calculates and outputs the number of data bits per symbol time; see col.17,7-26).

28. Regarding claim 69, Reuveni discloses sequential processing stages (290, 292, and 294 of Fig.10) driven by the sampling clock (col.18,36-39), where each result is used by a following sequential processing stage (the output of 290 is coupled to 292, which is coupled to 294).

29. Due to the recitation of "OR" terminology, limitations regarding parallel processing phases are considered optional and are not addressed.

### ***Conclusion***

30. This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal fee of \$255.00 (for a small entity).

If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

A reply under 37 CFR 1.113 to a final rejection must include the appeal from, or cancellation of, each rejected claim. The filing of an amendment after final rejection, whether or not it is entered, does not stop the running of the statutory period for reply to the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

31. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan J. Johnson whose telephone number is (571)270-1264. The examiner can normally be reached on Monday - Thursday, 9:00 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. J. J./  
Examiner, Art Unit 2817

/Robert Pascal/  
Supervisory Patent Examiner, Art Unit 2817